



A-579D.ST25.txt
SEQUENCE LISTING

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<110> Yoshinaga, Steven K.
<120> Novel Polypeptides Involved in Immune Response

<130> A-579D

<140> 09/728,421

<141> 2000-11-28

<150> PCT/US00/01871

<151> 2000-01-27

<150> US 09/264,527

<151> 1999-03-08

<150> US 09/244,448

<151> 1999-02-03

<160> 35

<170> PatentIn version 3.1

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48

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg

1 5 10 15

ctt tta aca gga gaa atc aat ggc tcg gcc gat cat agg atg ttt tca
96

Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser

20 25 30

ttt cac aat gga ggt gta cag att tct tgt aaa tac cct gag act gtc

1

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44

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val

35

40

45

cag cag tta aaa atg cga ttg ttc aga gag aga gaa gtc ctc tgc gaa

92

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu

50

55

60

ctc acc aag acc aag gga agc gga aat gcg gtg tcc atc aag aat cca

40

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro

65

70

75

80

atg ctc tgt cta tat cat ctg tca aac aac agc gtc tct ttt ttc cta

88

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu

85

90

95

aac aac cca gac agc tcc cag gga agc tat tac ttc tgc agc ctg tcc

36

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser

100

105

110

att ttt gac cca cct cct ttt caa gaa agg aac ctt agt gga gga tat

84

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr

115

120

125

ttg cat att tat gaa tcc cag ctc tgc tgc cag ctg aag ctc tgg cta

32

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu

130

135

140

ccc gta ggg tgt gca gct ttc gtt gtg gta ctc ctt ttt gga tgc ata

80

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile

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145 150 155 160

ctt atc atc tgg ttt tca aaa aag aaa tac gga tcc agt gtg cat gac 5
28
Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp

 165 170 175

cct aat agt gaa tac atg ttc atg gcg gca gtc aac aca aac aaa aag 5
76
Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys

 180 185 190

tct aga ctt gca ggt gtg acc tca 6
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Ser Arg Leu Ala Gly Val Thr Ser

 195 200

91 <210> 2
<211> 200
<212> PRT
<213> Mus musculus

<400> 2

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
1 5 10 15

Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
 20 25 30

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
 35 40 45

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
 50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65 70 75 80

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Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
165 170 175

Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
180 185 190

Ser Arg Leu Ala Gly Val Thr Ser
195 200

<210> 3
<211> 200
<212> PRT
<213> Mus musculus

<400> 3

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
1 5 10 15

Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
20 25 30

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
35 40 45

A-579D.ST25.txt

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
165 170 175

Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
180 185 190

Ser Arg Leu Ala Gly Val Thr Ser
195 200

<210> 4

<211> 218

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<213> Mus musculus

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Met Thr Leu Arg Leu Leu Phe Leu Ala Leu Asn Phe Phe Ser Val Gln
1 5 10 15

A-579D.ST25.txt

Val Thr Glu Asn Lys Ile Leu Val Lys Gln Ser Pro Leu Leu Val Val
20 25 30

Asp Ser Asn Glu Val Ser Leu Ser Cys Arg Tyr Ser Tyr Asn Leu Leu
35 40 45

Ala Lys Glu Phe Arg Ala Ser Leu Tyr Lys Gly Val Asn Ser Asp Val
50 55 60

Glu Val Cys Val Gly Asn Gly Asn Phe Thr Tyr Gln Pro Gln Phe Arg
65 70 75 80

Ser Asn Ala Glu Phe Asn Cys Asp Gly Asp Phe Asp Asn Glu Thr Val
85 90 95

Thr Phe Arg Leu Trp Asn Leu His Val Asn His Thr Asp Ile Tyr Phe
100 105 110

Cys Lys Ile Glu Phe Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Arg
115 120 125

Ser Asn Gly Thr Ile Ile His Ile Lys Glu Lys His Leu Cys His Thr
130 135 140

Gln Ser Ser Pro Lys Leu Phe Trp Ala Leu Val Val Val Ala Gly Val
145 150 155 160

Leu Phe Cys Tyr Gly Leu Leu Val Thr Val Ala Leu Cys Val Ile Trp
165 170 175

Thr Asn Ser Arg Arg Asn Arg Leu Leu Gln Val Thr Thr Met Asn Met
180 185 190

Thr Pro Arg Arg Pro Gly Leu Thr Arg Lys Pro Tyr Gln Pro Tyr Ala
195 200 205

Pro Ala Arg Asp Phe Ala Ala Tyr Arg Pro

210

215

<210> 5
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 <220>
 <223> Synthetic

 <220>
 <221> misc_feature
 <222> (1)..(234)
 <223> Xaa is an unspecified amino acid

<400> 5

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 1 5 10 15

Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Val Xaa Xaa Ser Cys Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 50 55 60

Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Cys Xaa
 65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 85 90 95

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asn Xaa Xaa Val Xaa Phe Xaa Leu
 100 105 110

Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Cys Xaa Xaa Xaa
 115 120 125

A-579D.ST25.txt

Xaa Xaa Xaa Pro Pro Pro Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Gly Xaa
130 135 140

Xaa Xaa His Ile Xaa Glu Xaa Xaa Leu Cys Xaa Xaa Xaa Xaa Xaa Xaa
145 150 155 160

Lys Leu Xaa Trp Xaa Leu Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa
165 170 175

Xaa Xaa Leu Leu Xaa Xaa Xaa Xaa Leu Xaa Xaa Ile Trp Xaa Xaa Xaa
180 185 190

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa
195 200 205

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg
210 215 220

Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa
225 230

Q1

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<220>
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48
Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

gtt tgg aag aag ctc cat gtt tct agc ggg ttc ttt tct ggt ctt ggt
96
Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly

A-579D.ST25.txt

20

25

30

ctg ttc ttg ctg ctg ttg agc agc ctc tgt gct gcc tct gca gag act 1
44

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr

35

40

45

gaa gtc ggt gca atg gtg ggc agc aat gtg gtg ctc agc tgc att gac 1
92

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp

50

55

60

ccc cac aga cgc cat ttc aac ttg agt ggt ctg tat gtc tat tgg caa 2
40

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln

65

70

75

80

atc gaa aac cca gaa gtt tcg gtg act tac tac ctg cct tac aag tct 2
88

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser

85

90

95

cca ggg atc aat gtg gac agt tcc tac aag aac agg ggc cat ctg tcc 3
36

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser

100

105

110

ctg gac tcc atg aag cag ggt aac ttc tct ctg tac ctg aag aat gtc 3
84

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val

115

120

125

acc cct cag gat acc cag gag ttc aca tgc cgg gta ttt atg aat aca 4
32

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr

130

135

140

A-579D.ST25.txt

gcc aca gag tta gtc aag atc ttg gaa gag gtg gtc agg ctg cgt gtg 4
80

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val

145 150 155 160

gca gca aac ttc agt aca cct gtc atc agc acc tct gat agc tcc aac 5
28

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn

165 170 175

ccg ggc cag gaa cgt acc tac acc tgc atg tcc aag aat ggc tac cca 5
76

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro

180 185 190

gag ccc aac ctg tat tgg atc aac aca acg gac aat agc cta ata gac 6
24

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp

195 200 205

acg gct ctg cag aat aac act gtc tac ttg aac aag ttg ggc ctg tat 6
72

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr

210 215 220

gat gta atc agc aca tta agg ctc cct tgg aca tct cgt ggg gat gtt 7
20

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val

225 230 235 240

ctg tgc tgc gta gag aat gtg gct ctc cac cag aac atc act agc att 7
68

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile

245 250 255

agc cag gca gaa agt ttc act gga aat aac aca aag aac cca cag gaa 8

A-579D.ST25.txt

16

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu

260

265

270

acc cac aat aat gag tta aaa gtc ctt gtc ccc gtc ctt gct gta ctg

8

64

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu

275

280

285

gcg gca gcg gca ttc gtt tcc ttc atc ata tac aga cgc acg cgt ccc

9

12

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro

290

295

300

cac cga agc tat aca gga ccc aag act gta cag ctt gaa ctt aca gac

9

60

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp

305

310

315

320

Q1

cac gcc

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His Ala

9

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<211> 322

<212> PRT

<213> Mus musculus

<400> 7

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr

35

40

45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
 50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
 65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
 85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
 100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
 115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
 130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
 145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
 165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
 180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
 195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
 210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
 225 230 235 240

A-579D.ST25.txt

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
290 295 300

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
305 310 315 320

His Ala

a1

<210> 8
<211> 322
<212> PRT
<213> Mus musculus

<400> 8

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

A-579D.ST25.txt

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

A-579D.ST25.txt

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
290 295 300

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
305 310 315 320

His Ala

<210> 9

<211> 306

<212> PRT

<213> Mus musculus

<400> 9

Met Ala Cys Asn Cys Gln Leu Met Gln Asp Thr Pro Leu Leu Lys Phe
1 5 10 15

Pro Cys Pro Arg Leu Ile Leu Leu Phe Val Leu Leu Ile Arg Leu Ser
20 25 30

Gln Val Ser Ser Asp Val Asp Glu Gln Leu Ser Lys Ser Val Lys Asp
35 40 45

Lys Val Leu Leu Pro Cys Arg Tyr Asn Ser Pro His Glu Asp Glu Ser
50 55 60

Glu Asp Arg Ile Tyr Trp Gln Lys His Asp Lys Val Val Leu Ser Val
65 70 75 80

Ile Ala Gly Lys Leu Lys Val Trp Pro Glu Tyr Lys Asn Arg Thr Leu
85 90 95

Tyr Asp Asn Thr Thr Tyr Ser Leu Ile Ile Leu Gly Leu Val Leu Ser
100 105 110

Asp Arg Gly Thr Tyr Ser Cys Val Val Gln Lys Lys Glu Arg Gly Thr
115 120 125

A-579D.ST25.txt

Tyr Glu Val Lys His Leu Ala Leu Val Lys Leu Ser Ile Lys Ala Asp
130 135 140

Phe Ser Thr Pro Asn Ile Thr Glu Ser Gly Asn Pro Ser Ala Asp Thr
145 150 155 160

Lys Arg Ile Thr Cys Phe Ala Ser Gly Gly Phe Pro Lys Pro Arg Phe
165 170 175

Ser Trp Leu Glu Asn Gly Arg Glu Leu Pro Gly Ile Asn Thr Thr Ile
180 185 190

Ser Gln Asp Pro Glu Ser Glu Leu Tyr Thr Ile Ser Ser Gln Leu Asp
195 200 205

Phe Asn Thr Thr Arg Asn His Thr Ile Lys Cys Leu Ile Lys Tyr Gly
210 215 220

Asp Ala His Val Ser Glu Asp Phe Thr Trp Glu Lys Pro Pro Glu Asp
225 230 235 240

Pro Pro Asp Ser Lys Asn Thr Leu Val Leu Phe Gly Ala Gly Phe Gly
245 250 255

Ala Val Ile Thr Val Val Val Ile Val Val Ile Ile Lys Cys Phe Cys
260 265 270

Lys His Arg Ser Cys Phe Arg Arg Asn Glu Ala Ser Arg Glu Thr Asn
275 280 285

Asn Ser Leu Thr Phe Gly Pro Glu Glu Ala Leu Ala Glu Gln Thr Val
290 295 300

Phe Leu
305

<210> 10
<211> 327

A-579D.ST25.txt

<212> PRT
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 <220>
 <223> Synthetic
 <220>
 <221> misc_feature
 <222> (2)..(327)
 <223> Xaa is an unspecified amino acid

<400> 10

Met Xaa Xaa Xaa Cys Xaa Cys Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Pro
 1 5 10 15

Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa
 20 25 30

Leu Phe Xaa Leu Leu Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Val Xaa Leu Xaa Cys Xaa
 50 55 60

Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Tyr Trp
 65 70 75 80

Gln Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa
 85 90 95

Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Tyr Lys Asn Arg Xaa Xaa Xaa
 100 105 110

Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Leu Xaa Xaa Xaa Xaa
 115 120 125

Xaa Xaa Xaa Xaa Asp Xaa Xaa Xaa Xaa Xaa Cys Xaa Val Xaa Xaa Xaa
 130 135 140

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Leu Xaa

A-579D.ST25.txt

145 150 155 160

Xaa Xaa Ala Xaa Phe Ser Thr Pro Xaa Ile Xaa Xaa Ser Xaa Xaa Xaa
165 170 175

Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Thr Cys Xaa Xaa Xaa Xaa Gly Xaa
180 185 190

Pro Xaa Pro Xaa Xaa Xaa Trp Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa
195 200 205

Ile Xaa Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
210 215 220

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa
225 230 235 240

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa
245 250 255

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa
260 265 270

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Val Xaa Val Xaa Xaa
275 280 285

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa
290 295 300

Xaa Arg Xaa Xaa Xaa Xaa Ser Xaa Thr Xaa Gly Pro Xaa Xaa Xaa Xaa
305 310 315 320

Xaa Glu Xaa Thr Xaa Xaa Xaa
325

<210> 11
<211> 864
<212> DNA
<213> Mus musculus

A-579D.ST25.txt

<220>

<221> CDS

<222> (1)..(864)

<223>

<400> 11

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48

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu

1 5 10 15

cga gct gat act cag gag aag gaa gtc aga gcg atg gta ggc agc gac
96

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp

20 25 30

gtg gag ctc agc tgc gct tgc cct gaa gga agc cgt ttt gat tta aat
44

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn

35 40 45

gat gtt tac gta tat tgg caa acc agt gag tcg aaa acc gtg gtg acc
92

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr

50 55 60

tac cac atc cca cag aac agc tcc ttg gaa aac gtg gac agc cgc tac
40

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr

65 70 75 80

cgg aac cga gcc ctg atg tca ccg gcc ggc atg ctg cgg ggc gac ttc
88

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe

85 90 95

tcc ctg cgc ttg ttc aac gtc acc ccc cag gac gag cag aag ttt cac

3

A-579D.ST25.txt

36

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His

100

105

110

tgc ctg gtg ttg agc caa tcc ctg gga ttc cag gag gtt ttg agc gtt

84

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val

115

120

125

gag gtt aca ctg cat gtg gca gca aac ttc agc gtg ccc gtc gtc agc

32

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser

130

135

140

gcc ccc cac agc ccc tcc cag gat gag ctc acc ttc acg tgt aca tcc

80

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser

145

150

155

160

ata aac ggc tac ccc agg ccc aac gtg tac tgg atc aat aag acg gac

28

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp

165

170

175

aac agc ctg ctg gac cag gct ctg cag aat gac acc gtc ttc ttg aac

76

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn

180

185

190

atg cgg ggc ttg tat gac gtg gtc agc gtg ctg agg atc gca cgg acc

24

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr

195

200

205

ccc agc gtg aac att ggc tgc tgc ata gag aac gtg ctt ctg cag cag

72

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln

A-579D.ST25.txt

210

215

220

aac ctg act gtc ggc agc cag aca gga aat gac atc gga gag aga gac
20
Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp

7

225 230 235 240

aag atc aca gag aat cca gtc agt acc ggc gag aaa aac gcg gcc acg
68
Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr

7

245 250 255

tgg agc atc ctg gct gtc ctg tgc ctg ctt gtg gtc gtg gcg gtg gcc
16
Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala

8

260 265 270

ata ggc tgg gtg tgc agg gac cga tgc ctc caa cac agc tat gca ggt
64
Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly

8

275 280 285

<210> 12
<211> 288
<212> PRT
<213> Mus musculus

<400> 12

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
35 40 45

A-579D.ST25.txt

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
165 170 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

A-579D.ST25.txt

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

<210> 13

<211> 267

<212> PRT

<213> Homo sapiens

<400> 13

Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp Val Glu Leu Ser Cys
1 5 10 15

Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn Asp Val Tyr Val Tyr
20 25 30

Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr Tyr His Ile Pro Gln
35 40 45

Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr Arg Asn Arg Ala Leu
50 55 60

Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe Ser Leu Arg Leu Phe
65 70 75 80

Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His Cys Leu Val Leu Ser
85 90 95

Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val Glu Val Thr Leu His
100 105 110

Val Ala Ala Asn Phe Ser Val Pro Val Val Ser Ala Pro His Ser Pro
115 120 125

Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser Ile Asn Gly Tyr Pro
130 135 140

A-579D.ST25.txt

Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp Asn Ser Leu Leu Asp
145 150 155 160

Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn Met Arg Gly Leu Tyr
165 170 175

Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr Pro Ser Val Asn Ile
180 185 190

Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln Asn Leu Thr Val Gly
195 200 205

Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp Lys Ile Thr Glu Asn
210 215 220

Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr Trp Ser Ile Leu Ala
225 230 235 240

a1

Val Leu Cys Leu Leu Val Val Val Ala Val Ala Ile Gly Trp Val Cys
245 250 255

Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
260 265

<210> 14
<211> 276
<212> PRT
<213> Mus musculus

<400> 14

Glu Thr Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys
1 5 10 15

Ile Asp Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr
20 25 30

Trp Gln Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr
35 40 45

A-579D.ST25.txt

Lys Ser Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His
50 55 60

Leu Ser Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys
65 70 75 80

Asn Val Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met
85 90 95

Asn Thr Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu
100 105 110

Arg Val Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser
115 120 125

Ser Asn Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly
130 135 140

a

Tyr Pro Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu
145 150 155 160

Ile Asp Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly
165 170 175

Leu Tyr Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly
180 185 190

Asp Val Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr
195 200 205

Ser Ile Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro
210 215 220

Gln Glu Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala
225 230 235 240

Val Leu Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr

245

250

255

Arg Pro His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu
 260 265 270

Thr Asp His Ala
 275

<210> 15
 <211> 280
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<220>
 <221> misc_feature
 <222> (2)..(280)
 <223> Xaa is an unspecified amino acid

<400> 15

Glu Xaa Glu Val Xaa Ala Met Val Gly Ser Xaa Val Xaa Leu Ser Cys
 1 5 10 15

Xaa Xaa Pro Xaa Xaa Xaa Xaa Phe Xaa Leu Xaa Xaa Xaa Tyr Val Tyr
 20 25 30

Trp Gln Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Thr Tyr Xaa Xaa Pro Xaa
 35 40 45

Xaa Ser Xaa Xaa Xaa Asn Val Asp Ser Xaa Tyr Xaa Asn Arg Xaa Xaa
 50 55 60

Xaa Ser Xaa Xaa Xaa Met Xaa Xaa Gly Xaa Phe Ser Leu Xaa Leu Xaa
 65 70 75 80

Asn Val Thr Pro Gln Asp Xaa Gln Xaa Phe Xaa Cys Xaa Val Xaa Xaa
 85 90 95

A-579D.ST25.txt

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Val Xaa Leu
100 105 110

Xaa Val Ala Ala Asn Phe Ser Xaa Pro Val Xaa Ser Xaa Xaa Xaa Ser
115 120 125

Xaa Xaa Xaa Xaa Xaa Glu Xaa Thr Xaa Thr Cys Xaa Ser Xaa Asn Gly
130 135 140

Tyr Pro Xaa Pro Asn Xaa Tyr Trp Ile Asn Xaa Thr Asp Asn Ser Leu
145 150 155 160

Xaa Asp Xaa Ala Leu Gln Asn Xaa Thr Val Xaa Leu Asn Xaa Xaa Gly
165 170 175

Leu Tyr Asp Val Xaa Ser Xaa Leu Arg Xaa Xaa Xaa Thr Xaa Xaa Xaa
180 185 190

Xaa Xaa Xaa Cys Cys Xaa Glu Asn Val Xaa Leu Xaa Gln Asn Xaa Thr
195 200 205

a1

Xaa Xaa Ser Gln Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Lys Xaa Xaa Xaa
210 215 220

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu
225 230 235 240

Ala Val Leu Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Ile Xaa Xaa Xaa
245 250 255

Xaa Arg Xaa Arg Xaa Xaa Xaa Xaa Xaa Ser Tyr Xaa Gly Xaa Xaa Xaa Xaa
260 265 270

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
275 280

<210> 16
<211> 1294
<212> DNA

<213> Homo sapiens

<220>

<221> 5'UTR

<222> (1)..(199)

<223>

<220>

<221> CDS

<222> (200)..(1105)

<223>

<400> 16

gctggtacgc ctgcaggtac cggctccggaa ttcccgggtc gaccacgcg tccgcccacg
60cgctccgctgg agcgcagtta gagccgatct cccgcgcccc gaggttgctc ctctccgagg 1
20tctcccgcgg cccaagttct ccgcgccccg aggtctccgc gccccgaggt ctccgcggcc 1
80cgaggtctcc gcccgcacc atg cgg ctg ggc agt cct gga ctg ctc ttc ctg 2
32

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu

1

5

10

ctc ttc agc agc ctt cga gct gat act cag gag aag gaa gtc aga gcg 2
80

Leu Phe Ser Ser Leu Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala

15

20

25

atg gta ggc agc gac gtg gag ctc agc tgc gct tgc cct gaa gga agc 3
28

Met Val Gly Ser Asp Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser

30

35

40

cgt ttt gat tta aat gat gtt tac gta tat tgg caa acc agt gag tcg 3
76

Arg Phe Asp Leu Asn Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser

45

50

55

A-579D.ST25.txt

aaa acc gtg gtg acc tac cac atc cca cag aac agc tcc ttg gaa aac 24 Lys Thr Val Val Thr Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn	4
60 65 70 75	
gtg gac agc cgc tac cgg aac cga gcc ctg atg tca ccg gcc ggc atg 72 Val Asp Ser Arg Tyr Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met	4
80 85 90	
ctg cgg ggc gac ttc tcc ctg cgc ttg ttc aac gtc acc ccc cag gac 20 Leu Arg Gly Asp Phe Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp	5
95 100 105	
gag cag aag ttt cac tgc ctg gtg ttg agc caa tcc ctg gga ttc cag 68 Glu Gln Lys Phe His Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln	5
110 115 120	
gag gtt ttg agc gtt gag gtt aca ctg cat gtg gca gca aac ttc agc 16 Glu Val Leu Ser Val Glu Val Thr Leu His Val Ala Ala Asn Phe Ser	6
125 130 135	
gtg ccc gtc gtc agc gcc ccc cac agc ccc tcc cag gat gag ctc acc 64 Val Pro Val Val Ser Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr	6
140 145 150 155	
ttc acg tgt aca tcc ata aac ggc tac ccc agg ccc aac gtg tac tgg 12 Phe Thr Cys Thr Ser Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp	7
160 165 170	
atc aat aag acg gac aac agc ctg ctg gac cag gct ctg cag aat gac	7

A-579D.ST25.txt

60

Ile Asn Lys Thr Asp Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp

175

180

185

acc gtc ttc ttg aac atg cgg ggc ttg tat gac gtg gtc agc gtg ctg

08

Thr Val Phe Leu Asn Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu

190

195

200

agg atc gca cgg acc ccc agc gtg aac att ggc tgc tgc ata gag aac

56

Arg Ile Ala Arg Thr Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn

205

210

215

gtg ctt ctg cag cag aac ctg act gtc ggc agc cag aca gga aat gac

04

Val Leu Leu Gln Gln Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp

220

225

230

235

atc gga gag aga gac aag atc aca gag aat cca gtc agt acc ggc gag

52

Ile Gly Glu Arg Asp Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu

240

245

250

aaa aac gcg gcc acg tgg agc atc ctg gct gtc ctg tgc ctg ctt gtg

00

Lys Asn Ala Ala Thr Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val

255

260

265

gtc gtg gcg gtg gcc ata ggc tgg gtg tgc agg gac cga tgc ctc caa

48

Val Val Ala Val Ala Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln

270

275

280

cac agc tat gca ggt gcc tgg gct gtg agt ccg gag aca gag ctc act

96

His Ser Tyr Ala Gly Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr

A-579D.ST25.txt

285

290

295

ggc cac gtt tgaccggagc tcaccgcca gagcgtggac agggcttccg 11
45

Gly His Val

300

tgagacgcca ccgtgagagg ccaggtggca gcttgagcat ggactcccag actgcagggg 12
05

agcacttggg gcagcccca gaaggaccac tgctggatcc cagggagaac ctgctggcgt 12
65

tggtgtgat cctggaatga ggccctttc 12
94

<210> 17

<211> 302

<212> PRT

<213> Homo sapiens

<400> 17

a1

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
35 40 45

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95

A-579D.ST25.txt

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
165 170 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
290 295 300

A-579D.ST25.txt

<210> 18
 <211> 302
 <212> PRT
 <213> Homo sapiens

<400> 18

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
 1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
 20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80

al

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
 115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175

A-579D.ST25.txt

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
290 295 300

<210> 19
<211> 322
<212> PRT
<213> Mus musculus

<400> 19

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

A-579D.ST25.txt

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile

245

250

255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
 260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
 275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
 290 295 300

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
 305 310 315 320

His Ala

<210> 20
 <211> 329
 <212> PRT
 <213> Artificial Sequence

ai <220>
 <223> Synthetic
 <220>
 <221> misc_feature
 <222> (2)..(329)
 <223> Xaa is an unspecified amino acid

<400> 20

Met Xaa Leu Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Leu Xaa
 20 25 30

Leu Phe Xaa Leu Leu Xaa Ser Ser Leu Xaa Ala Xaa Xaa Xaa Glu Xaa
 35 40 45

A-579D.ST25.txt

Glu	Val	Xaa	Ala	Met	Val	Gly	Ser	Xaa	Val	Xaa	Leu	Ser	Cys	Xaa	Xaa
50						55					60				
Pro	Xaa	Xaa	Xaa	Xaa	Phe	Xaa	Leu	Xaa	Xaa	Xaa	Tyr	Val	Tyr	Trp	Gln
65					70					75					80
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Thr	Tyr	Xaa	Xaa	Pro	Xaa	Xaa	Ser
					85				90					95	
Xaa	Xaa	Xaa	Asn	Val	Asp	Ser	Xaa	Tyr	Xaa	Asn	Arg	Xaa	Xaa	Xaa	Ser
			100					105						110	
Xaa	Xaa	Xaa	Met	Xaa	Xaa	Gly	Xaa	Phe	Ser	Leu	Xaa	Leu	Xaa	Asn	Val
			115				120					125			
Thr	Pro	Gln	Asp	Xaa	Gln	Xaa	Phe	Xaa	Cys	Xaa	Val	Xaa	Xaa	Xaa	Xaa
	130					135					140				
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Leu	Xaa	Xaa	Xaa	Val	Xaa	Leu	Xaa	Val
145						150					155				160
Ala	Ala	Asn	Phe	Ser	Xaa	Pro	Val	Xaa	Ser	Xaa	Xaa	Xaa	Ser	Xaa	Xaa
				165					170					175	
Xaa	Xaa	Xaa	Glu	Xaa	Thr	Xaa	Thr	Cys	Xaa	Ser	Xaa	Asn	Gly	Tyr	Pro
			180					185					190		
Xaa	Pro	Asn	Xaa	Tyr	Trp	Ile	Asn	Xaa	Thr	Asp	Asn	Ser	Leu	Xaa	Asp
		195					200					205			
Xaa	Ala	Leu	Gln	Asn	Xaa	Thr	Val	Xaa	Leu	Asn	Xaa	Xaa	Gly	Leu	Tyr
	210					215					220				
Asp	Val	Xaa	Ser	Xaa	Leu	Arg	Xaa	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Xaa	Xaa
225					230					235					240
Xaa	Cys	Cys	Xaa	Glu	Asn	Val	Xaa	Leu	Xaa	Gln	Asn	Xaa	Thr	Xaa	Xaa
				245					250					255	

A-579D.ST25.txt

Ser Gln Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa
260 265 270

Xaa Xaa Xaa Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Ala
275 280 285

Val Leu Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Ile Xaa Xaa Xaa Xaa
290 295 300

Arg Xaa Arg Xaa Xaa Xaa Xaa Ser Tyr Xaa Gly Xaa Xaa Xaa Val Xaa
305 310 315 320

Xaa Glu Xaa Xaa Leu Thr Xaa His Xaa
325

<210> 21
<211> 1370
<212> DNA
<213> Homo sapiens

al <220>
<221> 5'UTR
<222> (1)..(165)
<223>

<220>
<221> CDS
<222> (166)..(762)
<223>

<400> 21
aacaatttca cacaggaaac agctatgacc atgattacgc caagctctaa tacgactcac
60

tatagggaaa gctggtacgc ctgcaggtac cgggccggaa ttcccggggtc gacccacgcg 1
20

tccgtgaaca ctgaacgcga ggactgttaa ctgtttctgg caaac atg aag tca ggc 1
77

Met Lys Ser Gly

1

all

all

A-579D.ST25.txt

61

Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu His Ile Tyr Glu

120

125

130

tca caa ctt tgt tgc cag ctg aag ttc tgg tta ccc ata gga tgt gca
09

Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro Ile Gly Cys Ala

135

140

145

gcc ttt gtt gta gtc tgc att ttg gga tgc ata ctt att tgt tgg ctt
57

Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu Ile Cys Trp Leu

150

155

160

aca aaa aag aag tat tca tcc agt gtg cac gac cct aac ggt gaa tac
05

Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro Asn Gly Glu Tyr

165

170

175

180

atg ttc atg aga gca gtg aac aca gcc aaa aaa tct aga ctc aca gat
53

Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser Arg Leu Thr Asp

185

190

195

gtg acc cta taatatggaa ctctggcacc caggcatgaa gcacgttggc
02

Val Thr Leu

cagttttcct caacttgaag tgcaagattc tcttatttcc gggaccacgg agagtctgac
62

ttaactacat acatcttctg ctggtgtttt gttcaatctg gaagaatgac tgtatcagtc
22

aatggggatt ttaacagact gccttggtac tgccgagtcc tctcaaaaca aacaccctct
82

tgcaaccagc tttggagaaa gccagctcc tgtgtgctca ctgggagtgg aatccctgtc

A-579D.ST25.txt

42

tccacatctg ctcttagcag tgcacagcc agtaaaacaa acacatttac aagaaaaatg 11
02

ttttaagat gccaggggta ctgaatctgc aaagcaaag agcagccaag gaccagcatc 11
62

tgccgcatt tcactatcat actacctctt ctttctgtag ggatgagaat tcctctttta 12
22

atcagtcaag ggagatgctt caaagctgga gctattttat ttctgagatg ttgatgtgaa 12
82

ctgtacatta gtacatactc agtactctcc ttcaattgct gaaccccagt tgaccatttt 13
42

accaagactt tagatgcttt cttgtgcc 13
70

<210> 22

<211> 199

<212> PRT

<213> Homo sapiens

<400> 22

a1

Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
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Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
20 25 30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
35 40 45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
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Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

A-579D.ST25.txt

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
115 120 125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
130 135 140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
145 150 155 160

Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
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Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
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Arg Leu Thr Asp Val Thr Leu
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Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
20 25 30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
35 40 45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
50 55 60

A-579D.ST25.txt

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
65 70 75 80

Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
115 120 125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
130 135 140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
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Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
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Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
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Arg Leu Thr Asp Val Thr Leu
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20 25 30

A-579D.ST25.txt

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
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Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
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Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
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Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
180 185 190

Ser Arg Leu Ala Gly Val Thr Ser
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actattaggg tcatgcac
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